



Guntoori <i>et al.</i> Claim 1	Patent Application Claim 1
1. The process for preparing (R)-5-[2-(4-fluorophenyl)-5-(1-methylethyl)-3-phenyl-4-[(phenylamino)carbonyl]-1H-pyrrol-1-yl]-5-hydroxy-3-oxo-1-heptanoic acid, R-substituted ester 9 comprising:	1. A process for preparing (R)-5-[2-(4-fluorophenyl)-5-(1-methylethyl)-3-phenyl-4-[(phenylamino)carbonyl]-1H-pyrrol-1-yl]-5-hydroxy-3-oxo-1-heptanoic acid, tert-butylester comprising:
(a) making (R,S)-5-[2-(4-fluorophenyl)-5-(1-methylethyl)-3-phenyl-4-[(phenylamino)carbonyl]-1H-pyrrol-1-yl]-3-hydroxy-1-pentanoic acid, (S)-2-hydroxy-1,2,2-triphenylethyl ester by reacting the aldehyde 1 with the enolate form of (S)-2-hydroxy-1,2,2-triphenylethyl acetate substituent in a chelating co-solvent;	(a) reduction of 5-[2-(4-fluorophenyl)-5-(1-methylethyl)-3-phenyl-4-[(phenylamino)carbonyl]-1H-pyrrol-1-yl]-3-oxo-1-pentanoic acid, (R)-2-hydroxy-1,2,2-triphenylethyl ester
(b) hydrolysis of (R,S)-5-[2-(4-fluorophenyl)-5-(1-methylethyl)-3-phenyl-4-[(phenylamino)carbonyl]-1H-pyrrol-1-yl]-3-hydroxy-1-pentanoic acid, (S)-2-hydroxy-1,2,2-triphenylethyl ester (2a and 2b) using a base, in a solvent to form the carboxylic acid 7;	(b) hydrolysis of (R)-5-[2-(4-fluorophenyl)-5-(1-methylethyl)-3-phenyl-4-[(phenylamino)carbonyl]-1H-pyrrol-1-yl]-3-hydroxy-1-pentanoic acid, (R)-2-hydroxy-1,2,2-triphenylethyl ester using an alkali base in a solvent to form the acid;
(c) treating the acid 7 with a chiral base to form a salt and purifying the salt to obtain enantiomerically enriched (R)-7 chiral base salt;	
(d) alkylation of the (R)-7 chiral base salt or the free base derived from (R)-7, forming (R)-5-[2-(4-fluorophenyl)-5-(1-methylethyl)-3-phenyl-4-[(phenylamino)carbonyl]-1H-pyrrol-1-yl]-5-hydroxy-3-oxo-1-heptanoic acid, R-substituted ester 9 which would be useful in the production of atorvastatin calcium 6,	(c) alkylation of the acid forming (R)-5-[2-(4-fluorophenyl)-5-(1-methylethyl)-3-phenyl-4-[(phenylamino)carbonyl]-1H-pyrrol-1-yl]-5-hydroxy-3-oxo-1-heptanoic acid, tert-butylester.
wherein R is C1 to C6 alkyl, C6 to C9 aryl or C7 to C10 aralkyl.	